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10/814,579	03/31/2004	Tal Drory	200315226-1	6932

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EXAMINER	
DAYE, CHELCIE L	
ART UNIT	**PAPER NUMBER**
2161	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/814,579	DRORY ET AL.	
	Examiner	Art Unit	
	Chelcie Daye	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *3/26/07* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is issued in response to applicant's amendment filed on March 26, 2007.

2. Claims 1-23 are presented. No claims added and none cancelled.

3. Claims 1-23 are pending.

4. Applicant's arguments filed March 26, 2007, have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US Patent No. 6,920,446) filed March 21, 2002, in view of Shaw (US Patent No. 6,684,219) filed November 24, 1999.

Regarding Claims 1,11-13,16, and 21-22, Wang discloses a system for performing query operations, the system comprising:

a base table having a plurality of spatial objects (column 4, lines 37-43, Wang). However, Wang is silent with respect to an index table that comprises a plurality of data entries, the plurality of data entries being associated with the

plurality of spatial objects. On the other hand, Shaw discloses an index table that comprises a plurality of data entries, the plurality of data entries being associated with the plurality of spatial objects (column 10, lines 16-43, Shaw). Wang and Shaw are analogous art because they are from the same field of endeavor of providing a representation of spatial objects. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Shaw's teachings into the Wang system. A skilled artisan would have been motivated to combine as suggested by Shaw at column 5, lines 33-48, in order to permit easy and complete updating of data, more complex queries, and direct exporting of data into the relational tables. Therefore, the combination of Wang in view of Shaw, disclose a module adapted to perform a query operation on the index table (column 14, lies 8-24, Shaw), the module configured to; convert a query window into a plurality of values (column 14, lines 24-56, Shaw); create a scan range for each of the plurality of values with a begin range value and an end range value from the plurality of values (column 7, lines 50-64, Wang), wherein the scan range includes a stop condition (column 4, lines 22-30, Wang); scan the plurality of data entries for each of the scan ranges to identify one of the end range value and the stop condition (column 8, lines 30-45, Wang); and return a result based upon the plurality of data entries that are within the scan range for each of the plurality of values (column 8, Table 5, Wang).

Regarding Claim 2, the combination of Wang in view of Shaw, disclose the system wherein the stop condition is satisfied if one of the plurality of data entries is not Z-value equivalent to one of the plurality of values being utilized to scan the plurality of data entries (column 1, lines 44-46, Wang).

Regarding Claims 3 and 14, the combination of Wang in view of Shaw, disclose the system wherein the index table is a Polygon Map Region QuadTree index (column 13, lines 32-46, Shaw).

Regarding Claims 4 and 23, the combination of Wang in view of Shaw, disclose the system wherein the plurality of data entries each comprises a Z-value field and an object identification field (column 4, lines 46-55 and column 6, Table 3, Wang).

Regarding Claim 5, the combination of Wang in view of Shaw, disclose the system wherein the result comprises a plurality of object identification fields that correspond to a plurality of data entries (column 4, lines 41-50, Wang).

Regarding Claims 6,17, and 20, the combination of Wang in view of Shaw, disclose a system for performing query operations, the system comprising:

a base table having a plurality of spatial objects (column 4, lines 37-43, Wang);

an index table that comprises a plurality of data entries, the plurality of data entries being associated with the plurality of spatial objects in the base table (column 10, lines 16-43, Shaw);

a module adapted to perform a query operation on the index table (column 14, lies 8-24, Shaw), the module configured to;

convert a query window into a plurality of values (column 14, lines 24-56, Shaw);

perform a first scan for one of the plurality of values on the plurality of data entries (column 5, lines 27-41, Wang);

return a result from the first scan of the plurality of data entries (column 5, lines 54-57 and Table 1, Wang);

determine whether a second of the plurality of values may return the result with a second scan (column 6, lines 30-36, Wang);

skip the second scan if the second scan is determined to return the result (column 7, lines 58-64, Wang); and

perform the second scan if the second scan is determined not to return the result (column 6, lines 15-24, Wang).

Regarding Claim 7, the combination of Wang in view of Shaw, disclose the system wherein the plurality of values comprises a plurality of Z-values and the plurality of data entries comprise a plurality of fields, wherein one of the plurality of fields is a Z-value field (column 4, lines 46-55 and column 6, Table 3, Wang).

Regarding Claim 8, the combination of Wang in view of Shaw, disclose the system wherein the results comprise an empty identifier or a table having a plurality of Z-values and a plurality of object identifications (column 4, lines 46-55 and column 6, Table 3, Wang).

Regarding Claim 9, the combination of Wang in view of Shaw, disclose the system comprising creating a scan range for each of the plurality of values with a begin range value and an end range value from the plurality of values (column 7, lines 50-64, Wang), wherein the scan range includes a stop condition (column 4, lines 22-30, Wang);

Regarding Claim 10, the combination of Wang in view of Shaw, disclose the system wherein the begin range value is higher than the end range value; and the module is configured to perform the first scan on the plurality of data entries in descending order (columns 3-4, lines 63-67 and 1-2, respectively, Wang).

Regarding Claim 15, the combination of Wang in view of Shaw, disclose the method wherein scanning comprises comparing each of the plurality of data entries to at least one of the plurality of values to determine if each of the plurality

of data entries is Z-value equivalent to the at least one of the plurality of values (column 8, lines 15-30, Wang).

Regarding Claim 18, the combination of Wang in view of Shaw, disclose the method wherein the result may be one of an empty identifier or a table that comprises a Z-value field and an object identification field (column 4, lines 46-55 and column 6, Table 3, Wang).

Regarding Claim 19, the combination of Wang in view of Shaw, disclose the method comprising combining each of the results into a result table to be provided to a user in response to the query operation (column 7, lines 23-35, Wang).

Response to Arguments

Applicant argues, the Wang reference, the Shaw reference, and/or any their combination does not disclose, "a module configured to convert a query window into a plurality of values".

Examiner respectfully disagrees. As stated in the action above, Shaw discloses at column 14, lines 24-56, wherein "*the query process of the present invention begins with the user accessing the system, typically through a terminal or graphical user interface (not shown) and electing a query transaction. The system responds at step 90 by opening the map interface to the database...The user specifies*

at step 91 a geographic area of coverage, either by coordinate points, longitude/latitude coordinates, or a place name optionally selected from a table of place names. The system responds at step 92 by accessing the object-oriented databases, searching for a match between the database of spatial objects and the requested area of interest...At step 93, the system lists to the user all databases whose geographic coverage includes at least part of the area of interest, regardless of whether the databases are VPF, RPF, or TPS. The user selects the database of choice at step 94. The system responds at steps 95 and 96 by listing all libraries within the database whose objects at least intersect the geographic area of interest. At step 97, the user selects a library of choice, in response to which the system lists to the user at step 98 all coverages and features covered by the selected library. Exemplary coverages include population, obstruction, hydrography, earth cover, transportation, and navigation. The user then selects at step 99 a coverage or feature(s) desired. It is important to note that the actual objects are delivered to the user, not just a map or overlay of the qualifying area". Examiner interprets the query process beginning by the user accessing the graphical user interface, electing a query transaction, and opening the map interface to the database to correspond to the converting of the query window. Further, examiner interprets the listing of all of the databases of choice, the listing of all the libraries within the database, and then the listing of all coverages (i.e., population, obstruction, hydrography, etc.) to correspond to the plurality of values that the query window has been converted into. As a result, the argued limitation above has been fully disclosed.

Applicant argues, there is no disclosure in the Wang reference, the Shaw reference, or their combination of a module configured to "create a scan range for each of the plurality of values with a begin range value and an end range value from the plurality of values, wherein the scan range includes a stop condition".

Examiner respectfully disagrees. As stated in the action above, Wang disclose at column 7, lines 50-64, wherein Table 4 shows the column headings 'Block Start' and 'Block End' with interval ranges under each column. Also, the citation states, "*In Table 4, the merged level-6 z-regions are in a block at z-level 4 that starts at [2,2] and ends at [3,3]*". Examiner interprets the 'Block Start' as the begin range value and 'Block End' as the end range value. Further explanation with reference to the intervals can be found at column 5, lines 27-37. Next, Wang discloses at column 4, lines 22-30, wherein "*The z-regions are iteratively split until a termination criterion is met*". Examiner interprets the termination criterion to correspond to the stop condition. As a result, the argued limitation above has been fully disclosed.

Applicant argues the Wang reference alone or in combination with Shaw does not disclose "skipping the second scan if the second scan is determined to return the result".

Examiner respectfully disagrees. As stated in the action above, Wang discloses at column 7, lines 58-64, wherein "*the merged level-6 z-regions are in a block at z-level 4 that starts at [2,2] and ends at [3,3]. The z-code associated with this block is 0011.*

The remaining z-regions are still at level 6 since they have not been merged at 116. The merge at 116 is repeated until there are no further neighboring z-regions (at any z-level) with z codes that differ only by the least significant bit". Examiner interprets the repetition of the merge as representing the return of the result not determined, which thereby corresponds to the skipping the second scan if the second scan is determined to return the result. As a result, the argued limitation above has been fully disclosed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chelcie Daye whose telephone number is 571-272-3891. The examiner can normally be reached on M-F, 7:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chelcie Daye
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Technology Center 2100
May 8, 2007

APU MOFIZ
SUPERVISORY PATENT EXAMINER